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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,931	11/09/2001	Marc R. Amling	02580-P0006A	9959
24126	7590	11/18/2004	EXAMINER	
ST. ONGE STEWARD JOHNSTON & REENS, LLC 986 BEDFORD STREET STAMFORD, CT 06905-5619			HENN, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/039,931		AMLING ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Timothy J Henn		2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/24/02, 4/4/02</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, 14, 16, 17, 19, 20 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (US 5,627,583).

**[claim 1]**

In regard to claim 1, Nakamura discloses a video imaging system (Figure 7), comprising: a camera head for transmitting image data (Figure 7, Items 1 and 2); a camera control unit for receiving and processing said image data from said camera head (Figure 7, Item 3); a storage device accessible by said camera control unit (Figure 7, Items 64 and 65); said storage device containing a program (c. 4, ll. 44-57); said program executing on said camera control unit for modifying hardware (c. 4, ll. 5-8) of said camera control unit to process said image data (c. 4, ll. 44-57).

**[claim 2]**

In regard to claim 2, Nakamura discloses a video imaging system wherein said camera control unit comprises a field programmable gate array (Figure 7, Item 16; c. 4, ll. 5-8).

**[claim 3]**

In regard to claim 3, Nakamura discloses a video imaging system wherein said program configures said reconfigurable hardware device of said camera control unit to enable it to process said image data from said camera head (c. 4, ll. 44-57).

**[claim 4]**

In regard to claim 4, Nakamura discloses a video imaging system wherein said camera control unit comprises a CPU or "microprocessor" (Figure 7, Item 18).

**[claim 5]**

In regard to claim 5, Nakamura discloses a video imaging system wherein said programmable hardware device executes said program to enable said camera control unit to process said image data from said camera head (c. 7, ll. 58-62).

**[claim 6]**

In regard to claim 6, Nakamura discloses a video imaging system wherein said camera control unit comprises a field programmable gate array (Figure 7, Item 16; c. 4, ll. 5-8) and a CPU or "microprocessor" (Figure 7, Item 66).

**[claim 7]**

In regard to claim 7, Nakamura discloses a video imaging system wherein said program configures said reconfigurable hardware device of said camera control unit to enable it to process said image data from said camera head (c. 4, ll. 44-57); and wherein said programmable hardware device executes said program to enable said camera control unit to process said image data from said camera head (c. 7, ll. 58-62; The examiner notes that the CPU of Nakamura enables the camera control unit to

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process image data by loading the circuit data in the FPGA).

**[claim 8]**

In regard to claim 8, Nakamura discloses an alternate embodiment wherein said storage device is located within said camera head (Figure 2).

**[claim 9]**

In regard to claim 9, Nakamura discloses an alternate embodiment wherein the storage device is located within the camera control unit (Figure 6).

**[claim 10]**

In regard to claim 10, Nakamura discloses a video imaging system wherein the storage device includes a removable, replaceable memory unit (Figure 7, Items 64 and 65).

**[claim 11]**

In regard to claim 11, Nakamura discloses a video imaging system wherein said storage device (Figure 2, Items 19 and 20) is remotely accessible (i.e. accessible by the camera control unit while the storage device is connected to the camera head).

**[claim 14]**

In regard to claim 14, Nakamura discloses a video imaging system wherein said program enables said camera control unit to issue commands to said camera head (c. 4, ll. 58-59).

**[claim 16]**

In regard to claim 16, the examiner notes that by the signal processor 16 of Nakamura providing driving signals to the CCD of the camera head, the camera head

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inherently adjusts operating characteristics as claimed.

**[claim 17]**

In regard to claim 17, Nakamura discloses a video imaging system comprising: a camera for transmitting image data (Figure 7, Items 1 and 2); a camera control unit for receiving and processing the image data from said camera (Figure 7, Item 3); a storage device accessible by said camera control unit (Figure 7, Items 64 and 65); software executing on said camera control unit for receiving a program stored on said storage device (c. 4, ll. 44-57); and said program executing on said camera control unit for modifying hardware (c. 4, ll. 5-8) of said camera control unit for receiving the image data (c. 4, ll. 44-57).

**[claim 19]**

In regard to claim 19, Nakamura discloses a video imaging system further comprising software executing on said camera control unit for downloading said program when said camera is in communication with said camera unit (c. 7, l. 66 - c. 8, l. 10).

**[claim 20]**

In regard to claim 20, Nakamura discloses a video imaging system wherein the storage device (Figure 7, Items 64 and 65) is a remote (i.e. on the camera) location.

**[claim 27]**

In regard to claim 27, Nakamura discloses a video imaging system comprising: a camera control unit for receiving and processing image data (Figure 7, Item 3); a program for enabling said camera control unit to process the image data (c. 7, ll. 57-62);

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a configurable hardware device located on said camera control unit for processing the image data (Figure 7, Item 16); a processor located on said camera control unit for executing said program (Figure 7, Item 66); and said program executing on said processor for modifying said configurable hardware device and enabling said camera control unit to process the image data (c. 7, ll. 57-65).

**[claim 28]**

In regard to claim 28, the examiner notes that if a first endoscope is replaced by a second endoscope as described in Nakamura, a pre-existing program would inherently be located on the configurable hardware device.

**[claim 29]**

In regard to claim 29, the examiner notes that if a first endoscope is replaced by a second endoscope as described in Nakamura, a pre-existing program located on the configurable hardware device would inherently be overwritten when the circuit data for the second endoscope is written to the programmable hardware device.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 12, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Chiloyan et al. (US 2002/0095501 A1).

**[claim 12]**

5. In regard to claim 12, Nakamura discloses all limitations except for a storage device which is an intranet location. Chiloyan discloses a system which automatically downloads device control information from remote storage devices such as intranet locations (Paragraph 0034) to fully automate the download of control information and eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the system of Nakamura to automatically download control information from intranet locations to eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability.

**[claim 13]**

6. In regard to claim 13, Nakamura discloses all limitations except for a storage device which is an internet location. Chiloyan discloses a system which automatically downloads device control information from remote storage devices such as internet locations (Paragraph 0034) to fully automate the download of control information and eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the system of Nakamura to automatically download control information from internet locations to



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eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability.

**[claim 21]**

In regard to claim 21, Nakamura discloses all limitations except for a storage device which is an internet location. Chiloyan discloses a system which automatically downloads device control information from remote storage devices such as internet locations (Paragraph 0034) to fully automate the download of control information and eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the system of Nakamura to automatically download control information from internet locations to eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Oshima (US 6,638,212).

**[claim 15]**

In regard to claim 15, Nakamura discloses all limitations except for a camera head which sends confirmation to the camera control unit that the commands were received and have been execute. Oshima discloses an endoscope system wherein a camera control unit sends commands to a camera head, and the camera head transmits a response indicating whether the commands were properly executed or not

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(Figures 11 and 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a system such as that taught by Oshima in the system of Nakamura to determine whether commands that were transmitted to the camera head from the camera control unit were received and properly executed or not.

8. Claim 18, 22-24, 26 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Dowdy et al. (US 6,295,082).

**[claim 18]**

In regard to claim 18, Dowdy discloses Nakamura discloses all limitations except for software executing on the camera control unit for determining when said camera is in communication with the camera control unit. Dowdy teaches an endoscope system which detects when a camera head is attached to the camera control unit and automatically downloads information about the camera head from the camera head to the camera control unit (Figure 3; c. 5, ll. 9-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a system for detecting when the camera head is connected to automate the process of downloading information from the camera head to the camera control unit of Nakamura.

**[claim 22]**

In regard to claim 22, Nakamura discloses a video imaging system for transmitting image data (Figure 2, Items 1 and 2); a camera control unit for receiving

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and processing the image data from said camera (Figure 2, Item 3); a storage device accessible by said camera control unit (Figure 2, Items 19 and 20); software executing on the camera control unit for receiving a program stored on said storage device when said camera is in communication with said camera control unit (c. 4, ll. 44-57); said program executing on said camera control unit for modifying hardware of said camera control unit (c. 4, ll. 44-57); and said program executing on said camera control unit for enabling said camera control unit to process the image data (i.e. by rewriting the FPGA 16; c. 4, ll. 44-57). However, Nakamura lacks software executing on said camera control unit for determining when said camera is in communication with said camera control unit.

Dowdy teaches an endoscope system which detects when a camera head is attached to the camera control unit and automatically downloads information about the camera head from the camera head to the camera control unit (Figure 3; c. 5, ll. 9-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a system for detecting when the camera head is connected to automate the process of downloading information from the camera head to the camera control unit of Nakamura.

**[claim 23]**

In regard to claim 23, Nakamura discloses a video imaging system wherein the configurable portion further comprises a field programmable gate array (Figure 2, Item 16; c. 4, ll. 5-8).

**[claim 24]**

In regard to claim 24, Nakamura discloses a video imaging system wherein said program configures said field programmable gate array of said camera control unit to enable it to process image data from said camera (c. 4, ll. 5-8; c. 4, ll. 44-57).

**[claim 26]**

In regard to claim 26, Nakamura discloses a video imaging system further including a second storage device and processed image data is stored on said second storage device (Figure 2, Item 15).

**[claim 30]**

In regard to claim 30, Nakamura does not disclose a non-overwritable portion for requesting the program. Official Notice is taken that it is well known in the computing art to provide non-overwritable portions containing a function of writing a program on reconfigurable hardware devices to ensure that the device can function properly even in the event that a new program is improperly written to the array. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a non-overwritable portion to ensure that recovery is possible even when a program is improperly written.

**[claim 31]**

In regard to claim 31, see claim 30.

**[claim 32]**

In regard to claim 32, Nakamura discloses a method for video imaging, comprising the steps of: providing a camera for transmitting image data (Figure 2, Items 1 and 2); providing a camera control unit for processing the transmitted image data

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(Figure 2, Item 3); retrieving a program for enabling the camera control unit to be compatible with the camera (c. 4, ll. 44-57); executing the program on the camera control unit (c. 4, ll. 44-57); and modifying a hardware device of the camera control unit to enable the camera control unit to process image data transmitted from the camera (c. 4, ll. 44-57). However, Nakamura lacks a step of determining when the camera is in communication with the camera control unit.

Dowdy teaches an endoscope system which detects when a camera head is attached to the camera control unit and automatically downloads information about the camera head from the camera head to the camera control unit (Figure 3; c. 5, ll. 9-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a step for detecting when the camera head is connected to automate the process of downloading information from the camera head to the camera control unit of Nakamura.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Dowdy et al. (US 6,295,082) as applied to claim 22 above, and in further view of Oshima (US 6,638,212).

**[claim 25]**

In regard to claim 25, Nakamura in view of Dowdy discloses a program enabling the camera control unit to issue commands to the camera (c. 4, ll. 58-59), but lacks a camera sending confirmation to the camera control unit that commands were received. Oshima discloses an endoscope system wherein a camera control unit sends

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commands to a camera head, and the camera head transmits a response indicating whether the commands were properly executed or not (Figures 11 and 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a system such as that taught by Oshima in the system of Nakamura to determine whether commands that were transmitted to the camera head from the camera control unit were received and properly executed or not.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art further shows the current state of the art in camera control units with reconfigurable parameters based on data obtained from camera heads:

i.	Okada et al.	US 5,868,666
ii.	Takahashi et al.	US 5,871,439
iii.	Takahashi et al.	US 6,215,517
iv.	Rouse et al.	US 6,249,311
v.	Fichtner et al.	US 6,360,362
vi.	Kido et al.	US 6,707,490
vii.	Abnet et al.	US 6,710,799


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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (703) 305-8327. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJH  
11/5/2004

  
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